

EXHIBIT 17

(Excerpted)

**IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF TEXAS
WACO DIVISION**

Sonos, Inc., §
§
Plaintiff, § No. 6:20-cv-881-ADA
v. §
§
Google LLC, §
§
Defendant. §

REPLY DECLARATION OF DOUGLAS C. SCHMIDT

I, Douglas C. Schmidt, hereby declare as follows:

1. I previously submitted a declaration dated April 27, 2021 (referred to herein as my “Opening Declaration”) that contained certain opinions as to how a person of ordinary skill in the art (“POSITA”) at the time of the inventions of U.S. Patent Nos. 9,967,615 (“’615 Patent”) and 10,779,033 (“’033 Patent”) would have understood certain claim terms. The contents of my Opening Declaration are herein incorporated by reference in their entirety.

I. SCOPE OF ASSIGNMENT

2. I understand that, on June 1, 2021, Google served its responsive claim construction brief (“Google’s brief”) along with a declaration of Dr. Christos Kyriakakis dated June 1, 2021 (“Dr. Kyriakakis’ Declaration”) that addressed certain claim terms found in the ’615 and/or ’033 Patents. Sonos has asked me to evaluate Google’s brief and Dr. Kyriakakis’ Declaration in connection with the ’615 and/or ’033 Patents and to provide my opinions in response thereto.

3. In particular, Sonos has asked me to evaluate and respond to Dr. Kyriakakis’ opinions regarding the following claim terms:

Patent	Term
'033 Patent	“data network”
'615 Patent	“local area network”
'615 Patent	“a media particular playback system”
'033 Patent	“wherein the instruction comprises an instruction”

4. This Reply Declaration explains my analysis of, and responsive opinions to, Dr. Kyriakakis' opinions regarding the above-identified claim terms that are used in the '615 or '033 Patent. In forming my opinions, I have read and understand the claims of the '615 and '033 Patents, the specification that is common to both the '615 and '033 Patents, and each of the patents' respective file histories. I have also reviewed Google's brief, Dr. Kyriakakis' Declaration, and the materials cited therein.

5. I reserve the right to supplement or clarify the opinions set forth herein, and if I am requested to do so, to provide additional opinions regarding the '615 and/or '033 Patents.

6. I am being compensated at my normal hourly consulting rate of \$550/hour for this matter. My compensation does not depend in any way on the nature of my opinions or the outcome of this case.

II. SUMMARY OF OPINIONS

7. As explained in detail herein, I disagree with Dr. Kyriakakis' analyses and opinions regarding the aforementioned claim terms of the '615 and '033 Patents. For the reasons explained in detail below and in my Opening Declaration, it is my opinion that a POSITA at the time of the inventions of the '615 and '033 Patents would have understood the above-identified claim terms as follows:

Patent	Term	POSITA's Understanding
'033 Patent	“data network”	Plain and ordinary meaning “a medium that interconnects devices, enabling them to send digital data packets to

		and receive digital data packets from each other”
'615 Patent	“local area network”	Plain and ordinary meaning “data network that interconnects devices within a limited area, such as a home or office”
'615 Patent	“a media particular playback system”	“a media playback system” (Not indefinite)
'033 Patent	“wherein the instruction comprises an instruction”	Not indefinite

8. I understand that Sonos and/or Google may seek construction of claim terms in the '615 and/or '033 Patents other than those expressly addressed herein. I have not analyzed, and express no opinions on, the proper construction of any other claim term in the '615 or '033 Patents at this time.

III. BACKGROUND & QUALIFICATIONS

9. My background and qualifications are set forth in my Opening Declaration.

IV. LEGAL STANDARDS

10. I set forth my understanding of certain legal standards that counsel had informed me about in my Opening Declaration.

11. I have been informed by counsel about legal standards relevant to indefiniteness because Dr. Kyriakakis opined that the terms “a media particular playback system” found in certain claims of the '615 Patent and “wherein the instruction comprises an instruction” found in certain claims of the '033 Patent are indefinite.

12. In this regard, for starters, I understand that an issued U.S. patent is presumed to be valid, which includes a presumption that the claims are not indefinite, and that the burden is on the party challenging validity to prove by clear and convincing evidence that a claim is

invalid. Thus, I understand that Google must prove by clear and convincing evidence that the term “wherein the instruction comprises an instruction” is indefinite.

13. I further understand that a claim is invalid for indefiniteness if the claim, read in light of the specification and the prosecution history, fails to inform a POSITA about the scope of the claimed invention with reasonable certainty. In contrast, I understand that a claim is not invalid for indefiniteness if the patent is precise enough to afford clear notice of what is claimed and apprise the public of what is still open to them. Moreover, I understand that the claims, when read in light of the specification and the prosecution history, must provide objective boundaries for a POSITA to understand the scope of the invention.

14. Lastly, while I understand that reasonable certainty is the applicable standard for definiteness, I also understand that a modicum of uncertainty may be tolerated and that absolute precision is not required.

15. In connection with Dr. Kyriakakis’ opinions regarding the term “wherein the instruction comprises an instruction,” I have also been informed by counsel about legal standards relevant to the transitional claim term “comprising”/“comprises.”

16. Specifically, I understand that a transitional claim term such as “comprising” or “comprises” is synonymous with “including,” “containing,” or “characterized by,” and such a transitional term is open-ended in that it does not exclude additional, unrecited elements or method steps.

V. **LEVEL OF ORDINARY SKILL IN THE ART**

17. I set forth my opinion regarding the level of ordinary skill in the art for the ’615 and ’033 Patents in my Opening Declaration. For convenience, I have reproduced my articulation of the proper level of ordinary skill in the art below:

[A] person of ordinary skill in the art for purposes of the '615 and '033 Patents is a person having the equivalent of a four-year degree from an accredited institution (typically denoted as a B.S. degree) in computer science, computer engineering, electrical engineering, or an equivalent thereof, and approximately 2-4 years of professional experience in the fields of networking and network-based systems or applications, such as consumer audio systems, or an equivalent level of skill, knowledge, and experience.

18. Dr. Kyriakakis reached a different conclusion, opining that:

[A] person of ordinary skill in the art at this time would have had a bachelor's of science in electrical engineering, computer science or engineering, or a related field, and two to four years of work or research experience in the field of information networks, data communications, or multimedia systems, or a Master's degree and one to two years of experience in the same field.

Kyriakakis Dec. at ¶ 31.

19. As is evident, Dr. Kyriakakis' articulation of the level of ordinary skill in the art is much broader than my own. For instance, Dr. Kyriakakis contends that "two to four years of work or research experience in the field of information networks, data communications, or multimedia systems" is sufficient. *Id.* I disagree for several reasons.

20. First, the '615 and '033 Patents are directed to networked media systems that operate on local and wide area data networks. Dr. Kyriakakis expresses extremely broad views of what is encompassed by the terms "data" and "network" in the abstract, and thus, Dr. Kyriakakis' implied meanings of "information networks" and "data communications" ostensibly cover many kinds of "networks" and forms of communication not relevant to the inventions of the '615 and '033 Patents, such as a traditional analog radio broadcast and individuals talking via two cups attached by a string. *See, e.g., id.* at ¶ 62; Kyriakakis Dep. Tr. at 60:18-61:2, 152:20-155:11. In my opinion, having 2-4 years of general experience with these kinds of "networks" and/or forms of communication would not make an individual a POSITA for the '615 and '033 Patents.

21. Second, Dr. Kyriakakis contends that 2-4 years of experience in the field of “multimedia systems” is sufficient, which seems to be broad enough to encompass conventional multimedia systems comprised of an A/V receiver (or the like) connected to passive speakers via traditional speaker wires. But as noted above, the ’615 and ’033 Patents are specifically directed to ***networked*** media systems that operate on local and wide area data networks, which are distinctly different from conventional multimedia systems. In my opinion, having 2-4 years of experience with conventional multimedia systems alone would not make an individual a POSITA for the ’615 and ’033 Patents.

22. For these reasons, it is my opinion that Dr. Kyriakakis’ articulation of the level of ordinary skill in the art is overly broad, and thus incorrect. Moreover, in my opinion, Dr. Kyriakakis’ use of this overly-broad level of ordinary skill in the art when interpreting the ’615 and ’033 Patents underlies many of the flaws in Dr. Kyriakakis’ analyses and opinions set forth in his declaration. For example, as I discuss in further detail below, it is my opinion that a POSITA having the proper level of ordinary skill in the art that I articulated, reproduced above (a “proper POSITA”), would not reach the conclusions that Dr. Kyriakakis reaches with respect to “data network,” nor would such a POSITA confuse an “instruction” transmitted over a data network with “program instructions” stored on a computing device’s memory, as Dr. Kyriakakis did. *See, e.g., id.* at ¶¶ 60, 75. In fact, given how Dr. Kyriakakis approached his evaluation of these terms, not only has Dr. Kyriakakis used too broad of a POSITA but it also almost seems as though Dr. Kyriakakis is interpreting the claim terms through the lens of a layperson that does not even meet his own POSITA articulation.

VI. OVERVIEW OF THE ’615 & ’033 PATENTS

23. I provided an overview of the ’615 and ’033 Patents in my Opening Declaration.

IX. “A MEDIA PARTICULAR PLAYBACK SYSTEM”

81. As I explained in my Opening Declaration, it is my opinion that a POSITA would understand that (i) the phrase “a media particular playback system” found in dependent claims 3, 15, and 26 of the ’615 Patent contains an obvious error, (ii) the face of the ’615 Patent makes clear that the only reasonable correction for this error is to remove the word “particular” from the phrase, and (iii) there is nothing in the prosecution history suggesting any other reasonable correction should apply. In this regard, as I explained in my Opening Declaration, the modifier “media particular” before “playback system” is non-sensical (because it clearly contains a typographical error) and does not reflect how a POSITA would intentionally try to impart specific meaning to the phrase “playback system.” *See, e.g.*, Schmidt Op. Dec. at ¶¶ 102, 109.

82. On the other hand, Dr. Kyriakakis contends that the phrase “a media particular playback system” “has multiple reasonable interpretations” and “a POSITA would not be able to determine which of those reasonable interpretations is correct.” Kyriakakis Dec. at ¶ 54. I disagree.

83. For instance, Dr. Kyriakakis contends that, instead of the inclusion of “particular” in the phrase “media particular playback system” being a typographical error, the phrase “media particular playback system” could refer to a “playback system that can only play particular media formats[or] particular media types” Kyriakakis Dec. at ¶ 54. I disagree for several reasons.

84. As an initial matter, it is my opinion that no POSITA would reasonably interpret the language a “media particular playback system” to mean a “playback system that can only play particular media formats[or] particular media types,” which requires a POSITA to flip the recited words “media particular” around to instead read as “particular media.” In this respect, if a POSITA intended to refer to a particular format or type of media, as Dr. Kyriakakis contends,

the POSITA would have used the phrase “particular media,” not “media particular,” which is unnatural and nonsensical.

85. Moreover, it is my opinion that none of Dr. Kyriakakis’ alternative interpretations would be reasonable to a POSITA ***having read*** the claims and specification of the ’615 Patent. As to Dr. Kyriakakis’ first alternative interpretation of the phrase “media particular playback system” possibly referring to a “playback system that can only play particular media formats,” Dr. Kyriakakis points to no teaching whatsoever in the ’615 Patent’s specification of a “playback system” that only plays “particular media formats” (e.g., MP3, FLAC, MPEG-4, etc.⁹). I have reviewed the ’615 Patent’s specification and have been unable to identify any support for such a specific type of “playback system” either. In my opinion, it would be unreasonable for a POSITA that has read the ’615 Patent’s specification to interpret the phrase “media particular playback system” in a manner that is not supported by the ’615 Patent itself, as Dr. Kyriakakis’ first alternative interpretation would require.

86. As to Dr. Kyriakakis’ second alternative interpretation of the phrase “media particular playback system” possibly referring to a “playback system that can only play . . . particular media types” but not others, this second alternative interpretation is clearly unreasonable given the remaining language of claims 3, 15, and 26 of the ’615 Patent.

87. For instance, each of these claims further recites “wherein the particular playback device ***playing back the retrieved multimedia content*** comprises the particular playback device and the at least one additional playback device ***playing back the multimedia content in synchrony.***” If, as Dr. Kyriakakis contends, the phrase “media particular playback system”

⁹ While Dr. Kyriakakis did not explain what he means by “media formats,” I presume he is referring to media formats such as MP3, FLAC, MPEG-4, etc. See, e.g., <https://developer.android.com/guide/topics/media/media-formats>.

refers to a “playback system that can only play . . . particular media types,” as a way to differentiate from a playback system that can play other media types, then the bolded phrases containing “multimedia content” would be incorrect and should instead read “playing back the retrieved **multimedia content of the particular media types**” and “playing back the **multimedia content of the particular media types** in synchrony.” Of course, this is not how the remainder of the claims is worded (and no other claims of the ’615 Patent are worded in this manner). In my opinion, it would be unreasonable for a POSITA that has read the entirety of any one of claims 3, 15, or 26 of the ’615 Patent to interpret the phrase “media particular playback system” in a manner that is inconsistent with the remainder of the claim, as Dr. Kyriakakis’ second alternative interpretation would require.

88. Although it is unclear, it appears that Dr. Kyriakakis might be proposing a third alternative interpretation of the phrase “media particular playback system” in his assertion that “[a] POSITA could theoretically understand ‘media particular’ as intended to differentiate from ‘multimedia,’ i.e. a playback system specific to a particular type of media – such as audio.” Kyriakakis Dec. at ¶ 56. As an initial matter, Dr. Kyriakakis appears to be interpreting the term “multimedia” to require ***multiple*** types of media (as opposed to a ***single*** type of media), which is inconsistent with how the ’615 Patent uses the term “multimedia.” In this regard, the ’615 Patent repeatedly uses the term “multimedia” to refer to a ***single*** type of media, such as audio. *See, e.g.*, ’615 Patent at 1:66-2:14 (“[N]etworks can be used to connect one or more ***multimedia*** playback devices for a home or other location playback network (e.g., a home ***music*** system). . . . ***Music*** and/or ***other multimedia*** content can be shared”), 3:28-37 (“A zone player 102-124, also

referred to as a . . . ***multimedia*** unit, . . . provides ***audio, video, and/or*** audiovisual output.”), 6:8-7:19, 11:6-14, 12:8-63, 15:51-57, FIGs 2A-C.

89. Regardless, to the extent that Dr. Kyriakakis intends this to be a third alternative interpretation different from his second alternative interpretation (“playback system that can only play . . . particular media types”), it is similarly unreasonable given the remaining language of claims 3, 15, and 26 of the ’615 Patent.

90. For instance, as I explained before, each of these claims further recites “wherein the particular playback device ***playing back the retrieved multimedia content*** comprises the particular playback device and the at least one additional playback device ***playing back the multimedia content in synchrony***.” If, as Dr. Kyriakakis contends, the phrase “media particular playback system” refers to a “playback system specific to a particular type of media,” as a way to differentiate from a playback system that can play “multimedia” (which Dr. Kyriakakis appears to be interpreting to require multiple types of media), then the bolded phrases containing “multimedia content” would be incorrect and should instead read “playing back the retrieved **multimedia content of the particular type of media**” and “playing back the **multimedia content of the particular type of media** in synchrony.” This (mis)interpretation is not how the remainder of the claims is worded (and no other claims of the ’615 Patent are worded in this manner). As before, in my opinion, it would be unreasonable for a POSITA that has read the entirety of any one of claims 3, 15, or 26 of the ’615 Patent to interpret the phrase “media particular playback system” in a manner that is inconsistent with the remainder of the claim, as Dr. Kyriakakis’ apparent third alternative interpretation would require.

91. Dr. Kyriakakis also asserts that “[c]ertain playback systems also do not playback media,” “[a]n example of a playback system that is not ‘media particular’ would be an RF

spectrum analyzer that records and plays back RF data,” and thus, “a POSITA could also understand ‘media particular playback system’ as a subset of ‘playback systems.’” Kyriakakis Dec. at ¶ 57. In my opinion, this is not a reasonable interpretation of the phrase “media particular playback system” either.

92. In the context of the ’615 Patent, the term “playback system” exclusively refers to systems that are capable of playing back media. In fact, Dr. Kyriakakis has pointed to no teaching in the ’615 Patent to the contrary, which is unsurprising because the ’615 Patent never contemplates that a “playback system” could mean anything else. Given those facts, it is my opinion that, in the context of the ’615 Patent, a POSITA would never consider the term “playback system” to be broad enough to encompass something that does not play media, like an “RF spectrum analyzer.” Consequently, in my opinion, it would not be reasonable for a POSITA to interpret the modifier “media particular” before “playback system” to serve as a means for distinguishing a “playback system” that can play back media from one that cannot.

93. The prosecution history confirms my opinion. In this respect, the claims already recited a “media playback system” before the amendment was made that introduced the inadvertent inclusion of the word “particular.” *See Schmidt Op. Dec., App’x N at p.3 (pending claim 3), p.7 (pending claim 12), p.11 (pending claim 20).* As such, even before the word “particular” was added, the claims excluded systems that cannot play back media. Thus, a POSITA would readily appreciate that the amendment adding in the word “particular” was not made as an attempt to draw a distinction from systems that cannot play back media.

94. Lastly, even if a POSITA were trying to distinguish between systems that can playback media and those that cannot, it is my opinion that a POSITA would not do so by referring to the former as a “***media particular*** playback system” because that phrase is

nonsensical. Instead, in my opinion, a POSITA would refer to a system that can playback media as a “media playback system” or a “multimedia playback system.”

95. Assuming for sake of argument that Dr. Kyriakakis’ contention is correct that a POSITA could reasonably “understand ‘media particular playback system’ as a subset of ‘playback systems,’” that would leave two options -- either (i) the phrase “media particular playback system” refers to a “playback system” that can play back media or (ii) the phrase “media particular playback system” contains an error that should be fixed to instead recite “media playback system.” But either way, the result is the phrase being afforded the same meaning: a playback system that can play back media. Thus, in my opinion, Dr. Kyriakakis cannot credibly argue that the phrase is indefinite.

96. Lastly, Dr. Kyriakakis summarily stated with no analysis whatsoever: “I have reviewed the prosecution history, but find that it does not resolve the debate relating to the use of the term ‘particular.’” Kyriakakis Dec. at ¶ 58. However, Dr. Kyriakakis fails to acknowledge that the prosecution history confirms that there is ***no reasonable*** debate.

97. In fact, when the amendments introducing the typographical error to claims 3, 15, and 26 of the ’615 Patent were made, Sonos presented no argument to the USPTO distinguishing art based on “a playback system that can only play particular media formats[or] particular media types,” distinguishing a “playback system specific to a particular type of media” from a playback system that plays “multimedia,” or distinguishing “playback systems [that] do not playback media” versus those that do. *See Schmidt Op. Dec., App’x N at p.14.*

98. In my opinion, this confirms that Sonos was not meaning to impart any of the specialized meanings that Dr. Kyriakakis contends when the word “particular” was inserted between “media” and “playback system.” Instead, as I discussed in my Opening Declaration, a

POSITA would readily understand that Sonos merely inadvertently propagated the word “particular” at an incorrect place in the claim language in its attempt to maintain proper antecedent basis.

99. Thus, the prosecution history further confirms to a POSITA that there is no reasonable debate that the word “particular” was inadvertently included in the phrase “media particular playback system.”

X. “WHEREIN THE INSTRUCTION COMPRISSES AN INSTRUCTION”

100. Dr. Kyriakakis contends that “[t]he specification of the ’033 Patent is of no help to determine the meaning of the phrase ‘wherein the instruction comprises an instruction,’ and it is my opinion that a person of ordinary skill in the art would be similarly unable to determine the meaning of the phrase.” Kyriakakis Dec. at ¶ 75. I disagree.

101. Each of independent claims 1 and 12 of the ’033 Patent recites, *inter alia*, “based on receiving the user input, ***transmitting an instruction*** for the at least one given playback device to take over responsibility for playback of the remote playback queue from the computing device” In turn, each of dependent claims 2 and 13 recites “wherein the instruction comprises an instruction for” and continues setting forth additional limitations of the transmitted “instruction.”

102. As I explained before, I have been informed that the transitional term “comprising”/“comprises” is synonymous with “including,” “containing,” or “characterized by,” and such a transitional term is open-ended in that it does not exclude additional, unrecited elements or method steps.

103. With that understanding in mind, I fail to see how Dr. Kyriakakis can credibly say that a POSITA would be unable to determine the meaning of the phrase “wherein the instruction

which is distinctly different from an executable “program instruction” stored in memory.

107. Accordingly, Dr. Kyriakakis’ discussion of concepts that are specific to executable “program instructions,” such as “a block of code,” “lines of codes,” one source code “function or method,” “one ‘for’ loop,” and “method calls,” etc. is irrelevant to the question of whether “wherein the instruction comprises an instruction” is indefinite and serves as an example of Dr. Kyriakakis interpreting the claim limitations through the lens of an individual that does not have the proper level of ordinary skill in the art.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Dated: June 15, 2021



DOUGLAS C. SCHMIDT